

ABSTRACT

5 A metal-supported porous carbon film wherein metal  
fine particles with a mean particle diameter of 0.7-20 nm  
are dispersed and supported on pore surface walls, fuel  
cell electrodes employing the metal-supported porous  
carbon film, a membrane-electrode assembly comprising the  
fuel cell electrodes bonded on both sides of a polymer  
electrolyte film, and a fuel cell comprising the fuel  
10 cell electrode as a constituent element. The support  
structure is such that metal fine particles having a  
controlled particle size are uniformly supported to allow  
effective utilization of the metal-based catalyst, and  
the fabrication steps are simple.